

### **REMARKS**

This communication responds to the Office Action mailed on December 11, 2008. Claim 27 is amended, no claims are canceled, and no claims are added in this communication. As a result, claims 27-46 are now pending in this Application.

#### **Supplemental Information Disclosure Statements**

The Applicant submitted a Supplemental Information Disclosure Statement and a PTO 1449 Form on November 18, 2008 and another Supplemental Information Disclosure Statement and a PTO 1449 Form on December 3, 2008. The Applicant respectfully requests that initialed copies of the PTO 1449 Forms be returned to the Applicant's Representatives to indicate that the cited documents have been considered by the Examiner.

#### **§ 101 Rejection of the Claims**

Claims 27-33 were rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

The Applicant has amended independent claim 27 to be clearly tied to a specific machine, such as **“a wireless access point”**, and thus believes that amended independent claim 27, as well as its dependent claims, satisfy the requirements of 35 U.S.C. § 101. Reconsideration and withdrawal of this rejection is therefore respectfully requested.

#### **§ 103 Rejection of the Claims**

Claims 27-31, 33-40 and 42-46 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Perahia et al. (U.S. 7,352,718 B1, hereinafter “Perahia”) in view of Shattil (U.S. 2004/0086027 A1, hereinafter “Shattil’027”) and Priotti (U.S. 2004/0120410).

Claims 32 and 41 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over Perahia in view of Shattil’027 and Priotti and further in view of Shattil (U.S. 2002/0150070 A1, hereinafter “Shattil’070”).

The Applicant does not admit that the cited references are prior art and reserves the right to swear behind these references at a later date. In addition, because the Office has not properly

established a *prima facie* case of obviousness, the Applicant respectfully traverses the rejection of the claims.

The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d (BNA) 1596, 1598 (Fed. Cir. 1988). As discussed in *KSR International Co. v. Teleflex Inc. et al.* (U.S. 2007), the determination of obviousness under 35 U.S.C. § 103 is a legal conclusion based on factual evidence. *See Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*, 7, 1336-37 (Fed. Cir. 2005). The legal conclusion, that a claim is obvious within § 103(a), depends on at least four underlying factual issues set forth in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966): (1) the scope and content of the prior art; (2) differences between the prior art and the claims at issue; (3) the level of ordinary skill in the pertinent art; and (4) evaluation of any relevant secondary considerations.

The *KSR* Court further held that “rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” (*See In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) cited with approval in *KSR Int’l v. Teleflex Inc.*, 127 S. Ct. 1727, 1740-41 (2007)).

Therefore, the Examiner must, as one of the inquiries pertinent to any obviousness inquiry under 35 U.S.C. §103, recognize and consider not only the similarities but also the critical differences between the claimed invention and the prior art. (*In re Bond*, 910 F.2d 831,834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990), *reh’g denied*, 1990 U.S. App. LEXIS 19971 (Fed. Cir.1990).) Critical differences in the prior art must be recognized (when attempting to combine references). (*In re Bond*, 910 F.2d 831,834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990), *reh’g denied*, 1990 U.S. App. LEXIS 19971 (Fed. Cir.1990).)

Moreover, the fact that a reference teaches away from a claimed invention is highly probative that the reference would not have rendered the claimed invention obvious to one of ordinary skill in the art. (*Stranco Inc. v. Atlantes Chemical Systems, Inc.*, 15 USPQ2d 1704, 1713 (Tex. 1990).) When the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious. (*Id.* at 4 citing *United States v. Adams*, 383 U.S. 39, 51-51 (1966).)

"If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." (*In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)). The CCPA has also noted that "[t]he court must be ever alert not to read obviousness into an invention on the basis of the applicant's own statements; that is, we must view the prior art without reading into that art appellant's teachings." *In re Spomnoble*, 160 USPQ 237, 243 (CCPA 1969). These principles have not been changed by the ruling in *KSR*.

Amended independent claim 27 reads as follows (with emphasis added):

27. A method, comprising:
- receiving from multiple stations, at a wireless access point, a plurality of uplinked spatial division multiple access (SDMA) data streams that are out of synchronism by a time period greater than an allowed guard band time period;**
  - converting by at least one first transformation module the plurality of SDMA data streams from a first time domain to a frequency domain;
  - separating by a spatial demultiplexer the plurality of SDMA data streams into a separated plurality of data streams in the frequency domain;
  - converting by at least one second transformation module the separated plurality of data streams from the frequency domain to a second time domain; and
  - synchronizing by a synchronization module the separated plurality of data streams in the second time domain.

The Applicant respectfully submits that Perahia does not disclose the claimed feature of **"receiving from multiple stations, at a wireless access point, a plurality of uplinked spatial division multiple access (SDMA) data streams that are out of synchronism by a time period greater than an allowed guard band time period"** as recited in claim 27.

The Applicant agrees with the admission by the Office, on page 4, "*Perahia*'718 fails to disclose converting the plurality of SDMA data streams from a first time domain to a frequency domain; separating the plurality of SDMA data streams into a separated plurality of data streams in the frequency domain; converting the separated plurality of data streams from the frequency domain to a second time domain".

The Office Action, on page 4, asserts, "*Regarding claim 27, Perahia*'718 discloses a method, comprising: **receiving from multiple stations** (Fig. 1 elements 104 are SDMA subscriber

*units) a plurality of uplinked spatial division multiple access (SDMA) data streams (i.e., Fig. 1 SDMA AP 102 receives uplink SDMA data streams from elements 104 as detailed in Column 5, Lines 1-5) that are out of synchronism by a time period greater than an allowed guard band time period (i.e., the allowed guard band time is shown in Figs. 7 & 8 and shows in Column 9, Lines 50-55 that the uplink transmission can be out of synch which has to exceed the guard band time)."* A close reading of Perahia reveals that this is incorrect. Referring to Perahia, e.g., column 5, lines 1-5, and column 9, lines 50-55, relied upon by the Office (with emphasis added):

According to embodiments of the present invention, **SDMA access point 102 may either transmit simultaneously to two or more of subscriber units 104 or simultaneously receive upstream transmissions from two or more of subscriber units 104.** This capability is provided as an extension to the IEEE 802.11a standard. Operations are preferably in accordance with so-called "infrastructure" mode where communication is always either to or from access point 102 rather than directly between subscriber units 104. Furthermore, access point 102 and the SDMA-capable ones of subscriber units 104 incorporate SDMA-related capability extensions as described below. (Perahia'718, column 5, lines 1-5).

In comparing the two preamble structures of FIG. 7 and FIG. 8, it will be appreciated that the embodiment of FIG. 8 allows timing and frequency synchronization as well as automatic gain control and start of packet detection to be based on both spatial subchannels at the expense of a longer overall preamble period. For upstream transmissions, automatic gain control can thus be performed separately for the two subscriber units. This permits less precise grouping of subscriber units for power control and timing control purposes. Downstream implementation of FIG. 8 may also be simpler due to the symmetry between the spatial subchannels. (Perahia'718, column 9, lines 50-55).

It is noted that nowhere in the above Perahia excerpt (relied upon by the Office) are the received data streams designated as **asynchronous**. In addition, the above Perahia excerpt does not reference "**an allowed guard band time period**" at all. Perahia thus cannot disclose that **the SDMA access point (102 in Fig. 1 of Perahia) receives upstream data streams that are out of synchronism by a time period greater than an allowed guard band time period.** The Applicant thus respectfully submits that Perahia does not disclose the claimed feature of "**receiving from multiple stations, at a wireless access point, a plurality of uplinked spatial**

**division multiple access (SDMA) data streams that are out of synchronism by a time period greater than an allowed guard band time period”** as recited in claim 27.

None of the other cited references (Shattil’027 and Priotti) remedies this defect of Perahia. The Applicant thus respectfully submits that, even when combined as proposed by the Office, Perahia, Shattil’027, and Priotti do not teach or suggest the claimed feature of **“receiving from multiple stations, at a wireless access point, a plurality of uplinked spatial division multiple access (SDMA) data streams that are out of synchronism by a time period greater than an allowed guard band time period”** as recited in independent claim 27. For at least this reason, the Applicant respectfully submits that the Office has not properly established a *prima facie* case of obviousness with respect to independent claim 27.

The above argument presented with respect to independent claim 27 also applies to independent claims 35, 40 and 44, which have similar features to independent claim 27. The Applicant thus respectfully submits that the Office does not establish a *prima facie* case of obviousness with respect to these independent claims either.

This conclusion with respect to independent claims 27, 35, 40 and 44 also applies to their dependent claims 28-34, 36-39, 41-43 and 45-46 as well, since any claim depending from a nonobvious independent claim is also nonobvious. *See* M.P.E.P. § 2143.03.

Reconsideration and withdrawal of the rejection of claims 27-46 under 35 U.S.C. § 103(a) are thus respectfully requested.

### **RESERVATION OF RIGHTS**

In the interest of clarity and brevity, every assertion made in the Office Action may not have been addressed. Silence regarding any such assertion does not constitute any admission or acquiescence. All rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference, are reserved. It is not admitted that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is

based upon the Examiner's personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, timely objection to such reliance on Official Notice is made, and all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03, are reserved. Similarly, all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04, are reserved.

### CONCLUSION

All pending claims are believed to be in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone the undersigned at (210) 308-5677 to facilitate prosecution of this Application. If necessary, please charge any additional fees or deficiencies, or credit any overpayments to Deposit Account No. 19-0743.

Respectfully submitted,

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